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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,693	04/26/2001	David W.J. Stringer-Calvert	SRI/4285-2	3289

7590 06/01/2004

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SHREWSBURY, NJ 07702

EXAMINER
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PATEL, NIKETA I

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/844,693

Applicant(s)

STRINGER-CALVERT ET AL.

Examiner

Niketa I. Patel

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
FRITZ FLEMING  
PRIMARY EXAMINER  
GROUP 2100

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities:

a. The description of figure 1 is not part of the section titled "Background of the Invention". Figure 1 is indicated as a prior art figure; therefore the description of this figure should be part of the Background of the Invention not the detailed description of the invention. Appropriate correction is required.

b. Line numbers are not provided for the claims and the abstract. Appropriate correction is required. The preferred format for numbering the claims is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant, all future correspondence should include the recommended line numbering.

***Claim Objections***

2. Claims 2-5, 7, 9-14, 16-17 are objected to because of the following informalities: A punctuation mark comma (,) is missing after the phrase 'The system of claim 1' in claims 1-4, 7, 9-11, 13-14, 16-17; in claim 5 after the phrase 'The system

of claim 4'; and in claim 12 after the phrase 'The system of claim 11'. Appropriate correction is required.

**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-13 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Pandya et al. U.S. Patent Number: 6,671,724 (hereinafter referred to as "Pandya".)

5. **Referring to claim 1**, Pandya teaches a group management system comprising: a plurality of interconnected nodes [see figure 4 - elements 70, 22] communicatively coupled with each other as member nodes of a virtual private network ("VPN") [see figure 4 - elements 70, 72, 76; column 4 - lines 22-46, 'control points'; column 9 - lines 50-65]; and a plurality of master nodes [see figure 4 - elements 72], each of the master nodes controlling membership in the VPN for an associated non-empty

subset of the member nodes [see column 4 - lines 22-46, 'control points'; column 7 - lines 3-39.]

6. **Referring to claim 2**, Pandya teaches the system wherein a membership change in at least one of the subsets can be performed without notifying all of the master nodes not associated with the changed subset [see column 4 - lines 22-46; column 6 - lines 39-59.]
7. **Referring to claim 3**, Pandya teaches the system wherein at least two of the subsets do not share any member nodes in common [see column 7 - lines 3-39; column 6 - lines 39-59.]
8. **Referring to claim 4**, Pandya teaches the system wherein at least two of the subsets share at least one member node in common [see column 7 - lines 3-39; column 6 - lines 39-59.]
9. **Referring to claim 5**, Pandya teaches the system wherein a communication involving said common member node can be transmitted along multiple paths [see column 7 - lines 3-39; column 6 - lines 39-59.]
10. **Referring to claim 6**, Pandya teaches the system further comprising an intrusion detection mechanism that receives said multiple-path communication as input [see column 7 - lines 3-39; column 6 - lines 39-59.]
11. **Referring to claim 7**, Pandya teaches the system of wherein in the event one of the master nodes fails, the associated

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subset of member nodes will be automatically reassigned to one or more other of the master nodes [see column 7 - lines 3-39; column 6 - lines 39-59.]

12. **Referring to claim 8**, *Pandya* teaches the system wherein each of the member nodes is associated with at least one of the master nodes as a back-up master [see column 7 - lines 3-39; column 6 - lines 39-59.]

13. **Referring to claim 9**, *Pandya* teaches the system wherein the plurality of interconnected nodes are communicatively coupled as part of a peer-to-peer network [see column 6 - lines 26-35; column 10 - lines 12-15.]

14. **Referring to claim 10**, *Pandya* teaches the system wherein the plurality of master nodes are part of an edge-based content delivery network [see column 6 - lines 26-35.]

15. **Referring to claim 11**, *Pandya* teaches the system wherein the member nodes are allocated to the subsets at least partly based upon one or more criteria of connectivity between each of the member nodes and the corresponding master nodes [see column 4 - lines 22-46; column 6 - lines 26-35.]

16. **Referring to claim 12**, *Pandya* teaches the system wherein the connectivity criteria are selected from a group of criteria comprising geographical distance, topological distance,

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bandwidth, latency, jitter, financial cost, and political boundaries [see column 8 - lines 47-67; column 9 - lines 1-13.]

17. **Referring to claim 13**, *Pandya* teaches the system wherein at least one of the master nodes further controls membership in another virtual overlay group different from the VPN [see column 7 - lines 3-39; column 6 - lines 39-59.]

18. **Referring to claim 17**, *Pandya* teaches the system wherein at least one of the master nodes are operable to remotely install software communication mechanisms for a new member node of the VPN without the necessity of installing augmented hardware for the new member node [see column 4 - lines 30-61; column 6 - lines 60-67; column 7 - lines 1-10.]

### ***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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20. Claim 14-16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pandya et al. U.S. Patent Number: 6,671,724 (hereinafter referred to as "*Pandya*".)

21. **Referring to claim 14**, *Pandya* teaches the system of wherein an encryption key is used for communication [see column 9 - lines 50-65; column 10 - lines 52-65] however, does not set forth the limitation of the system of wherein a communication from a first one of the subsets of the member nodes uses a first encryption key, and a communication from a second one of the subsets uses a second encryption key that is different from the first encryption key.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer networking art to get the advantage of secure data transmission by providing each unit/subset with it's own encryption key. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use two separate encryption keys for both of the subsets, to get this advantage.

22. **Referring to claim 15**, *Pandya* teaches the system of wherein an encryption key is used for communication [see column 9 - lines 50-65; column 10 - lines 52-65] however, does not set forth the limitation of the system wherein one or more of the

master nodes are operable to translate between the encryption keys.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer networking art to get the advantage of allowing devices connected to two different subsets to communicate with each other by providing a master node with a encryption key translator. It would have been obvious to one or ordinary skill in the art at the time of applicant's invention to use encryption key translator to get this advantage.

23. **Referring to claim 16**, *Pandya* teaches the system of wherein an encryption key is used for communication [see column 9 - lines 50-65; column 10 - lines 52-65] however, does not set forth the limitation of the system wherein a communication from a first one of the subsets of the member nodes and a communication from a second one of the subsets of the member nodes both use the same encryption key.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention that it was old and well known in the computer networking art to get the advantage of saving resources by using same encryption key to communicate with a device that is being shared between two different subsets of the member nodes. It would have been obvious to one or

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ordinary skill in the art at the time of applicant's invention to use same encryption key to get this advantage.

### **Conclusion**

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to virtual private network:

- c. Bots et al. U.S. Patent Number: 6,226,748
- d. Casey U.S. Patent Number: 6,493,349
- e. Pegrum et al. U.S. Patent Number: 6,516,417
- f. Gonda et al. U.S. Patent Number: 6,662,221


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (703) 305 4893. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (703) 308 3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP  
05/19/2004

  
FRITZ FLEMING  
PRIMARY EXAMINER  
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